MAR 2 8 2007 W

SEQUENCE LISTING

| | 10> 20> | RH | ONE- | POUL | ENC | AGR | 5 | | | | | , | MADE | | | |
|--------------------------|------------------|--|----------------|-------------------|-------------------|------------------|------------------|---------------------|-------------------|-------------------|-------------------|------------------|--------------|-------------------|-------------------|-----|
| <13 | • | Method for increasing the content of cysteine, methionine and glutathione in plants, and plants obtained | | | | | | | | | | | | | | |
| | | | | | | | | | | • | | | | .00 | | |
| <14 <14 | _ | | | | | | | | | | | | | | | |
| <15 | | | 9816: 98-1: | 163 2-17 | | | | ı | | | | | <i>1</i> 1 | | | |
| <16 <17 | • | 17 Pat | ent] | In V | er. | 2.1 | | | | | | | | | | |
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| <22 | | 000 | | | | | | | | | | | | | | |
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| ` | 27(3 | <i>L</i>) | (97 | 2) | | | | | | | | | | | | |
| | 00> 1 3agaq | • | cct | ettt | ca a | tcat | :BBS: | co a: Me | ig go at Al | a ac | a tç ır Cy | jc at /s [] | a ga e As | c ac | a tgc ur Cys | 54 |
| | 10 | - | nei | | QT. | 15 | Asp | geA ¢ | Ser | Arg | Phe 20 | Cys | Cys | Ile | aag Lys | 102 |
| 25 | | | | | 30 | £11 6 | 201 | VAL. | Asn | Arg 35 | Lys | IJe | His | His | acc Thr 40 | 150 |
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| - | | • | 60 | | , | GIU | FLO | 65 | ren | ser | Asn | Туг | Tyr 70 | Tyr | Ala | 246 |
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| ctg Leu 105 | ttc Phe | ata Ile | agc Ser | gtt Val | tta Leu 110 | gaa Glu | gaa Glu | agc Ser | cct Pro | gag Glu 115 | atc Ile | atc Ile | gaa Glu | tcc Ser | acg Thr 120 | 390 |
| aag Lys | Caa Gln | gat Asp | | ata Ile 125 | gca Ala | gtc Val | aaa Lys | gaa Glu | aga Arg 130 | gac Asp | cca Pro | gct Ala | tgt Cys | ata Tle 135 | agc Ser | 438 |

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|--|---------------------------|---------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-----|
| | cat His | cga Arg | ata Ile 155 | AT 3 | cat His | acc Thr | ctc | tgg Trp 160 | Lys | caç Gln | àac Asn | ags Arg | aaa Lys 165 | Ile | gta Val | gct Ala | 534 |
| | tta Leu | ttg Leu 170 | atc Ile | Caa Gln | aac Asn | aga Arg | gta Val 175 | tca Ser | gaa Glu | tct Ser | t tc Phe | gcc Ala 180 | gtc Val | gat Asp | att | cat His | 582 |
| | ecc Pro 185 | GIA | gcg Ala | aag Lys | atc Ile | gga Gly 190 | aaa Lys | ggg Gly | att Ile | ctt Leu | tta Leu 195 | qzA | cat His | gcg | acg Thr | gge Gly 200 | 630 |
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| | <u>Bro</u> ccâ | aag Lys | att Ile 235 | ggt Gly | gat Asp | ggt Gly | gtg Val | ttg Leu 240 | att Ile | gga Gly | gct Ala | giy aaa | agt Ser 245 | tgt Cys | ēta Ile | ttg Leu | 774 |
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| | gtg Val 265 | gtt Val | aag Lys | gat Asp | gtg Val | ccg Prc 270 | gcg Ala | egt Arg | acg Thr | acg Thr | gcg Ala 275 | gtt Val | gça Gly | aat Asn | 510 CCd | gcg Ala 280 | 870 |
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| | gtg Val | att Ile | taac | acaa | at g | t | | | | | | | | | | | 984 |
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| | cat o | aa t | ct c | ca t | CA a | Ag g | ag a | aa c | ta t | ct t | ec g | tt a | ec t | aa t | CC 0 | at | 102 |

Get caa tet eea tea aag gag oaa eta tet tee gtt ace caa tee gat 102 His Gln Ser Pro Ser Lys Glu Lys Leu Ser Ser Val Thr Gln Ser Asp 10 15 20

| gaa gca gaa gcg tca gcg gcg ata tet gcg gca get gca gat gcg 15 25 30 35 60 | o |
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| Ctt tgt tcc tca acg ctt tta tcc aca ctt tta tac gat ctg ttc tta 342 Leu Cys Ser Ser Thr Leu Leu Ser Thr Leu Leu Tyr Asp Leu Phe Leu 95 100 | |
| aac act tit tee tee gat cet tet ett egt aac gee ace gte gea gat 390 105 110 115 120 | |
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| Cys Leu Leu Asn Tyr Lys Gly Phe Lau Ala Ile Gln Ala His Arg Val 140 145 | |
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| Cac toa aga ato too gat gta tto got gtt gat ato cat coa gos gog 582 His Ser Arg lie Ser Asp Val Phe Ala Val Asp Ile Nis Pro Ala Ala 170 175 180 | |
| asg atc qga ass ggg ats ett eta gae eac gea acc gga gtt gta gtc 630 - 195 196 196 196 195 200 | |
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| aca cta ggt gga aca ggt aaa gct tgt gga gat aga cat ccg aag atc 726 Thr Leu Gly Gly Thr Gly Lys Ala Cys Gly Asp Arg His Pro Lys Ile 220 225 230 | |
| ggt gac ggt tgt ttg att gga gct gga gcg act att ctt gga aat gtg 774 Gly Asp Gly Cys Leu Ile Gly Ala Gly Ala Thr Ile Leu Gly Asn Val 235 240 245 | |
| ang att ggt gca ggt gct man gta gga gct ggt tot gtt gtg ctg att 822 Lys lie Gly Ala Gly Ala Lys Val Gly Ala Gly Ser Val Val Leu Ile 250 255 260 | |
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| gac gat gas tot ggo ttt ogt tac atg aac tac ttc ogt tat oot gat 150 25 30 35 40 |
| arg Ser Ser Phe Asn Gly Thr Gln Thr Lys Thr Leu His Thr Arg Pro |
| Leu Leu Glu Asp Leu Asp Arg Asp Ala Glu Val Asp Asp Val Trp Ala 60 60 60 60 60 60 60 60 60 60 60 60 60 |
| Lys Ile Arg Glu Glu Ala Lys Ser Asp Ile Ala Lys Glu Pro Ile Val |
| ser Ala Tyr Tyr His Ala Ser Ile Val Ser Gln Arg Ser Leu Glu Ala 90 95 100 |
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| Asp lie Val Glu Ser Val Lys Leu Asp Leu Ala Val Lys Glu Arg |
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| ttc ctc gct tgt caa gcg cat cgt att gct cat gag ctt tgg act cag 592 170 175 180 180 Trp Thr Gin |
|---|
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| Phe Ala Val Asp Phe His Pro Gly Ala Lys Ile Gly Thr Gly Ile Leu Cha Gag act |
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| Asn Asn Val Ser Ile Leu His Asn Val Thr Leu Gly Gly Thr Gly Lys Cag tgt gga gat acg cat acg cat gga gga acg ggg aca 774 240 240 245 |
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| got gtt gga aar oog gog agg ttg ort ggr ggr aaa gar aar oog aaa 966 300 305 305 310 |
| acg cat gac aag att cot ggt trg act atg gac cag acg tog cat ata 1014 The His Asp Lys Ile Pro Gly Leu Thr Met Asp Gin Thr Ser His Ile too gag tag tog tog gas |
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| Ash His His Ser Phe Leu Leu Pro Ser Phe Val Ser Ser Lys Phe Lys 30 35 40 |
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| get geg tge ate gae ace tge ege act ggt aaa eee eag att tet eet 246 Ala Ala Cys Ile Asp Thr Cys Arg Thr Gly Lys Pro Gln Ile Ser Pro 60 65 70 |
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| Asn Tyr Phe Arg Tyr Pro Asp Arg Ser Ser Phe Asn Gly Thr Gln Thr 95 100 |
| aaa acc ctc cat act cgt cct ttg ctt gaa Gat ctc gat cgc gac gct 390 Lys Thr Leu His Thr Arg Pro Leu Leu Glu Asp Leu Asp Arg Asp Ala 115 120 |
| Glu Val Asp Asp Val Trp Ala Lys Ile Arg Glu Glu Ala Lys Ser Asp |
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| ctc agc ast ttg sat ctt ccs agc aac acg ctt ttc gat ttg ttc tct 582 170 175 180 |
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| cett tta get get aag gag aga gat cet get tgt ata age tae get cat 678 Leu Leu Ala Val Lys Glu Arg Asp Pro Ala Cys Ile Ser Tyr Val His 205 210 215 |
| Cys Phe Leu His Phe Lys Gly Phe Leu Ala Cys Gln Ala His Arg Ile 220 225 226 227 |
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| Lys lie Gly Thr Gly ile Leu Asp His Ala Thr Ala Ile Val Ile 270 280 |

| ggt gag acg gcg gtt gtg ggg aac aat gtt tcg att ctc cat aac gtt 913 285 290 200 200 200 200 200 200 20 |
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| gac gtg ccg ccg cgt acg acg gct gtt gga aat ccg gcg acg ttg ctt 1110 340 340 340 340 340 340 340 |
| ggt ggt aaa gat aat ccg aaa acg cat gac aag att cct ggt ttg act 1158 360 Gly Gly Lys Asp Asn Pro Lys Thr His Asp Lys Ile Pro Gly Leu Thr atg gac cag acg tcg acg acg acg tcg acg acg acg acg acg acg acg acg acg a |
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| Glu Val Tyr Ala Lys Gly Thr His Lys Ser Glu Phe Asp com |
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| and Cit gag gra |
|--|
| Lys Leu Giu Ala Cu aaa gag cot att the |
| Lys Leu Giu Ala Glu Lys Glu Pro Ile Leu Ser ser Phe Lau Tyr Ala 85 90 90 |
| an a |
| ggt atc tta gca cat gat tgt tta gag caa gct tta ggg ttt ggt cta 336 |
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| Great get get gar age |
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| 310 Pro Ser Leu Ala Mer Lya |
| His Asp at age age tra |
| His Asp Ala Thr Lys Glu Phe Phe Arg His Val Ala Asp Gly Tyr Lys 315 315 315 320 320 320 320 320 320 |
| 325 The Phe Arg His Val Ale Asp Glumber 1008 |
| 330 ALA ASP GLY TYE LVS |
| 335 J |

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Glu Ben Ard Val Sar Tla Lau Hie Glu Val Thr Lau Glu Glu Thr Giv
           Gly Asp Arg Val ser lie Leu His Gly Val Thr Leu Gly Gly Thr Gly
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                                                                                   768
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                                                                                  816
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